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ABSTRACT

In order to design a long-range plan for developing and evaluating career education programs and services at Frederick Community College (Maryland), the following steps were taken: (1) 210 representatives of education, business, industry, and community organizations were selected to participate in a Delphi survey to define the goals of career education. Although only 104 individuals responded to the three rounds of Delphi questioning, the survey resulted in the identification of 10 clear-cut goals which are presented in this report. (2) In order to evaluate the college's current career education programs, a follow-up survey of career graduates was conducted, along with an employer evaluation of the career graduates. In addition, an examination of career faculty qualifications was made. (3) A plan of action was designed which gives both intermediate (3 to 5 years) and long-term (10 years) objectives for accomplishing the stated goals of career education at the college. This plan of action is designed to provide the general framework which is necessary for systematic planning, organizing, and evaluating career education activities, and is not intended to provide final procedures for carrying out these activities. The various survey instruments utilized in this project are appended, as is a bibliography of selected references. (Author/NHM)

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LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PARTS I, II, III

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Fall, 1971

JC 760 132

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PREFACE

In the spring of 1971, an Evaluation Team representing the Commission on Higher Education of the Middle States Association of Colleges and Secondary Schools conducted an accreditation readiness review of Frederick Community College. In their report to the Middle States Association, which preceded the awarding of full Accreditation to the College, the Evaluation Team made several helpful recommendations. One of the recommendations concerned the development of more complete long-range planning guidelines and procedures.

The President of the College in July, 1971, assigned the authors of this report the task of preparing a long-range plan for developing and evaluating career education programs and services.

The following document contains such a plan. It should be emphasized that the information and recommendations contained in this long-range plan are intended to be used as guidelines by all segments of the College in planning, organizing, and evaluating career programs. It is a "working" document and, as such, should be continually updated, revised, and improved.

The authors wish to express their appreciation to the many faculty members, administrators, advisory committee members, and community representatives who participated in

the lengthy surveys and provided such valuable inputs. Special thanks is due Dr. Lewis W. Stephens, Dean Carl H. Mitlehner, Dean Jane H. Jasper, and the Board of Trustees for their helpful guidance, timely recommendations and patient understanding during the preparation of this report.

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DEFINITIONS

In order to avoid the definition crisis, the following definitions of commonly used terms will be adhered to in this long-range plan, unless otherwise defined.

Career Education - is a concept which connotes a comprehensive educational program which begins in grade one or earlier and continues throughout the adult years and which focuses on preparation for the world of work. In the classic sense, it is what a person does to prepare for his life's "calling" or "vocation."

Occupational Education - includes all programs of instruction below the baccalaureate level, including elementary, secondary, and post-secondary, which are designed to acquaint persons with and prepare for the worldof work.

Vocational Education - specialized education emphasizing the development of skill competencies necessary for entry-level positions in the trade or semiskilled occupations.

Technical Education - education at the highly skilled or semiprofessional level which emphasizes science and mathematics in addition to laboratory procedures and which are ordinarily taught in a one or two year post-high school or college program.

Articulation - the interrelation of different levels of education, such as elementary, secondary and higher education to provide ease of entry from one level to another or from one curriculum to another.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART I

CAREER EDUCATION GOALS

Fall, 1971

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SUMMARY

CAREER EDUCATION GOALS

1. To develop a greater awareness of and interest in career programs at Frederick Community College among high school students and adults in Frederick County.
2. Increase efforts to provide career programs and services to correct educational deficiencies and handicaps which prevent individuals from benefiting from instruction essential to initial employment or re-employment.
3. Adopt in all career programs teaching methodology and evaluation techniques based upon operationally stated objectives and individual student differences in performance and rate of learning.
4. Develop a wider variety of types and levels of career programs in business and technology, allied health, public service, and agricultural fields through more efficient use of community resources, educational facilities, and innovative approaches to curriculum structure.
5. Develop a comprehensive career guidance program which assists students and adults alike in career planning, decision making, and adjustments throughout life, not just during their formal school years.

6. Prepare students for relevant careers which are based upon changing technology and economic trends, rather than geographic boundaries.
7. Increase business and community involvement in career education, to include greater use of advisory committees in planning and evaluating career programs, development of supervised work experience or cooperative education opportunities and needed continuing education programs.
8. Improve articulation, both horizontally (between community colleges) and vertically (between secondary schools and four-year colleges), in career programs to reflect career planning from secondary schools through the community college, or beyond.
9. Prepare students and adults to obtain gainful employment compatible with their interest and intellect which culminates in job placement of graduates commensurate with their skill and training.
10. Develop our present career programs to their fullest by continuous evaluation and revision of all programs.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART I

CAREER EDUCATION GOALS

INTRODUCTION

The first task of education, as stated by the American Association for the Advancement of Science, is to make it possible for the individual to develop his talents and to find a productive place in society. This statement of educational purpose emphasizes the essential elements of career education to which Frederick Community College is firmly committed. In general, Frederick Community College is dedicated to:

1. Providing an opportunity to enroll in the College for all who might profit from the experience of post-high school education.
2. Providing a wide variety of programs and services in response to the potential, the needs, and the interests of members of the community.

3. Providing a quality of educational experiences, implemented by a well-trained staff, augmented by adequate facilities, and geared to the attainment of academic excellence, realizing each student's potential.

The purpose of the Long-Range Career Education Plan is to set forth specific goals for career education at Frederick Community College in the decade ahead, to recommend a plan of action to achieve these goals and to provide a means of evaluating the results. The Long-Range Career Education Plan is divided into three parts. Part I is concerned with defining the goals for career education at Frederick Community College. The objective of Part II is to analyze the results of present career instructional and guidance programs. Part III presents recommendations that form a plan of action outlining intermediate and long-range objectives necessary to evaluate progress toward the career education goals.

NEED FOR GOALS

Long-range planning in education has been limited or nonexistent in the past, according to many educational researchers. Various reasons are given for this situation. A common reason given is that educators,

by necessity, are primarily concerned with such immediate factors as enrollment projections and per student expenditures. Consequently, the essentials of sound, long-range educational planning are often overlooked. The emphasis on short-range planning is understandable when it is realized that proper long-range planning requires adequate time, comprehensive data, and qualified personnel; all of which the hard-pressed institutional administrator usually does not have.

In discussing the necessity for long-range planning in education, Morphet and Jessen[1] suggest that educators first identify long-range goals and then develop steps to achieve them.

> "Planning for the future involves both the identification and acceptance of appropriate long-range purpose and goals and the development of suitable steps and procedures for attaining these goals."

The complex nature of career or occupational education warrants the use of a systematic planning procedure based upon clearly defined goals. The purpose of this section of the Long-Range Career Education Plan is to accomplish the above-recommended steps in the planning processes.

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1 Edgar L. Morphet and David L. Jessen, eds. "The Future and the Present: Planning for Improvements in Education." Cooperative Planning for Education in 1980 (New York, Citation Press, 1968).

RESEARCH METHODOLOGY

In clarifying the goals of career or occupational education, a public community college should reflect the best thinking of its faculty, administration, students, and community leaders. Because of obvious difficulties and time limitations involved in personally contacting or bringing together a large group of educational and community representatives, a questionnaire technique developed by Olaf Helmer and his colleagues at the Rand Corporation in the early 1950's, called the Delphi Technique, was used. This technique, which is built on the strength of informed, intuitive judgment, is intended to achieve a consensus of opinion without bringing the experts together in a face-to-face meeting. Contact is generally made with the experts through a series of successive questionnaires. The Delphi Technique was adapted to the needs of education by Dr. Frederick Cyphert, Dean of the Curry Memorial School of Education, University of Virginia, Charlottesville, Virginia and Dr. Walter Gant, Director of Adjustment Services, Norfolk City Schools, Norfolk, Virginia. Their work with the Delphi Technique was presented in the fall 1970 issue of "The Journal of Teacher Education."

SURVEY SAMPLE

Three basic criteria were used in selecting the individuals for participation in the Delphi survey. Each prospective respondent was evaluated on the basis of:

1. An understanding of the Community College philosophy.
2. A basic understanding of career or occupational education.
3. Involvement, directly or indirectly, in a decision-making role in education, community, or business organizations.

Based on these three criteria, 210 individuals were selected in the fall of 1971 to participate in the survey. These individuals were classified into the following three general target groups:

Target Population Groups	Number Selected		Number Responding*	
Educators				
FCC Faculty and Administration	45		23	
Frederick County School Teachers and Administration	24		14	
FCC Students and Graduates	11		2	
Group Total		80		39
Business and Industry				
FCC Career Advisory Committees	63		31	
Personnel Managers	20		11	
Group Total		83		42
Community Organizations				
City and County Officials	13		8	
Community Organizations	22		6	
County Vocational-Technical Council	12		9	
Group Total		47		23
Grand Total		210		104

*Includes only those who responded to all three surveys.

Out of the total sample of individuals selected for the survey, 104 or 49.5% of the individuals responded to all three of the survey instruments.

SURVEY INSTRUMENT

Three separate questionnaires were used in the Delphi survey. Delphi Questionnaire I, sent out on September 22, 1971, was designed to obtain a list of goals or recommended targets for action for career education in the decade ahead. (See sample Delphi Questionnaire I, Appendix A, page 65.) Each respondent was asked to briefly list from one to five targets or goals of high importance for career education at Frederick Community College.

In Delphi Questionnaire II, mailed on November 11, 1971, the 394 individual targets or goals for career education received in Delphi I were synthesized into 32 generic statements of goals that encomposed related ideas. (See sample Delphi Questionnaire II, Appendix B, page 66.) The respondents were then asked to indicate their opinion of the relative importance of each of the 32 goals on a scale of one to five; one being highest priority, two above average priority, three being average priority, four below average priority, and five the lowest priority.

The purpose of the Delphi III, sent out on December 3, 1971, was to increase the consensus and to more clearly define minority opinions. (See sample Delphi Questionnaire III, Appendix C, page 69.) Delphi III was a duplicate of Delphi II, except that it contained both the rating of each item that the individual gave on Delphi II and the modal consensus

of all the individuals who scored the questionnaire. The modal consensus was defined as the largest number of individuals marking any single rating. The respondents were then given the opportunity to change their rating to the rating of the consensus or to leave their rating outside the consensus by giving a brief reason.

ANALYSIS OF RESULTS

The summary of modal consensus ratings of Delphi III is shown in Appendix D, page 73. On the basis of the modal consensus, it can be seen that Goal 21 received the highest priority rating. Goals 14, 12, 30, 18, 24, 2, 29, 22, and 13 were next highest in priority. Of the 106 respondents, 101 or 95% of them responded to goal number 21 by rating it a 1 or the highest priority.

Several respondents noted on their survey forms that they had difficulty in rating the goals because of a similarity in meaning of some of the goal statements. Therefore, to determine if one or more of the goals were significantly interrelated, a factor analysis was conducted using the Delphi Questionnaire II ratings. Factoring or factor analysis is a statistical means of sorting items of information in terms of their relationships or commonalities.

> "Factor analysis starts with a set of observations obtained from a given sample by means of prior measure. It is a method of analyzing this set of observations from their intercorrelations to determine whether the variations represented can be accounted for adequately by a number of basic categories smaller than that with which the investigation was started." --Fruchton

Appendix E on page 76 shows the ten factors or groups of goals which resulted from the factor analysis. The higher the factor loadings, the stronger the commonality or relationship among them is likely to be. Delphi Questionnaire II results were used in the factor analysis instead of Delphi Questionnaire III results, because it was felt that Delphi II ratings would be less biased by other respondents' opinions.

The ten highest priority goals obtained in the modal consensus are included in at least one of the factors obtained. For example, Goal 21, which received the highest modal consensus priority rating, can be found in Factor 10 on page 80. Also included in this factor are Goals 20 and 32, which indicates that the respondents tended to rate all three goals in a similar way. Or to state it differently, there seems to be a significant relationship between these goals in the opinions of the respondents.

On the basis of the factor analysis, ten goals for career education were defined. An attempt was made to incorporate the meaning or concept of each target listed

in a factor into a single goal statement. Therefore, the 32 original goals identified in Delphi Questionnaire II were synthesized into ten final goals. The ten final goals of career education recommended for adoption by Frederick Community College are listed on pages 3 and 4.

The authors wish to recognize the assistance and cooperation of the many individuals who participated in Part I of the Career Education Study. Their support and interest in helping to develop relevant and realistic career education goals for Frederick Community College is greatly appreciated and will provide the foundation on which future career education programs can be developed.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART II

ANALYSIS OF CAREER PROGRAMS

Fall, 1971

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SUMMARY AND CONCLUSIONS

1. The addition of career programs at Frederick Community College has been a relatively recent development in the history of the College. Prior to 1967, the only career program offered was in business and accounting. By the fall of 1972, the following four additional career programs were offered: nursing, electronics technology, data processing and secretarial science.
2. Total enrollment in career programs has almost doubled since 1967, from an enrollment of 212 students in 1967 to 394 in the fall of 1971. Full-time enrollment has tripled during this period, from 51 to 165 career students.
3. The proportion of all Associate of Arts degrees awarded by Frederick Community College going to students in career programs was 25% in 1969, 35% in 1970 and 40% in 1971. The average proportion of A.A. degrees awarded to career students in 16 Maryland community colleges in 1971 was 29%.
4. Student Services, which provides such necessary support in career programs as recruiting, orientation, financial aid, counseling and placement, has grown from two full-time professional staff members in 1967 to seven full-time staff members in 1972.

5. In the fall of 1971, a follow-up questionnaire was sent to all past graduates of career programs. Sixty-four (64) completed questionnaires were returned, which was a response rate of 58%.
6. Ninety-seven per cent of the respondents indicated that they were employed on a full-time basis. Only one career graduate was unemployed at the time of the survey. Two out of three of those employed were working in jobs directly related to their course of study. This indicates that graduates of career programs at FCC have been very successful in obtaining jobs, even though many industries have been laying off employees due to the economic slump.
7. Although a detailed analysis of salary ranges in specific career programs was not possible, approximately half (48%) of the responding graduates were earning between $126 to $175 per week or $6552 to $9100 per year. Sixteen per cent, or about one out of six, earning $201 per week or over and 15% were earning $100 or less per week. The wide diversity in salary ranges is partly due to the differences in the number of years of experience since graduation.
8. In terms of the value of different types of courses taken when at FCC, almost all (80-[illegible]%) of the graduates felt that both the general education and career education courses were about what they expected or greater

than what they expected. However, when asked whether their employer recognized their educational preparation, almost a third (30%) indicated they thought their employer did not recognize their educational preparation in terms of job assignment or rate of pay. This situation seems to reinforce the contention cited by many career educators that two-year college graduates or para-professionals are still not fully accepted by industry and business employers.

9. Part-time employment was rated by the career graduates responding as being the most helpful experience they had, other than attending classes, while at FCC. Student activities and athletics were mentioned as being the next most helpful non-class experiences. The fact that part-time employment rated so high in the opinions of FCC graduates is not so surprising when it is considered that approximately half of our students are part-time students. It does, however, indicate the value placed by career graduates on actual work experience while attending college.
10. When evaluating contacts which were most helpful in securing employment after graduating from FCC, the career graduates indicated that finding a job themselves and assistance from friends, parents and relatives as

being most helpful in obtaining a job. Community college instructors, newspapers and the community college placement office were mentioned as the next most helpful contacts. Public and private employment agencies were least helpful. Since the objective of a career program is to prepare a student for a meaningful job after graduation, the College should increase efforts to assist the student in finding a job commensurate with his abilities and interests upon completing his program.

11. More than half (58%) of the career graduates had not decided on a vocation before attending FCC; of these students 65% decided while attending FCC, 8% decided on their vocation after graduating and 27% were still undecided. The proportion (58%) of graduates who did not make their career decision prior to attending FCC substantiates the need for extensive efforts by instructional and guidance personnel to assist students in making appropriate career decisions. The fact that 42% of the graduates made their decision before attending the College indicates the importance of articulation procedures between the secondary schools and the college which assists the student in planning his post-secondary educational careers. A carefully designed program of

career counseling, testing and orientation in cooperation with the secondary schools would be desirable.

12. More specialized, in-depth courses in the career programs, providing greater opportunities for on-the-job training or cooperative work-study programs, and more assistance in job placement were the most often suggested recommendations by the graduates for improving career programs.

13. Twenty-one employers were selected randomly to provide a confidential evaluation of FCC graduates. On an overall basis, FCC career graduates compare very favorably with their contemporaries on the five personal work traits evaluated: dependability, initiative, technical competence, cooperative attitude and personal appearance.

14. Expanding career programs to include on-the-job work experience, provide more clinical experience in the nursing program and increase emphasis on job skills and technical competences were recommended most often by employers as means of improving career programs.

15. Frederick Community College is fortunate to have a well qualified faculty, both in educational preparation and occupational experience. Of the ten full-time faculty members teaching in career programs, one has a Doctorate, five have earned Masters degrees,

two have Bachelors degrees plus 30 credits and two have their Bachelors degree. The average number of years teaching experience of full-time faculty members in career programs, before coming to FCC, was five years.

16. The ratio of full-time to part-time faculty members in the fall of 1971 of 1:.9. The relatively large proportion of part-time faculty in career programs is due in part to the many career courses offered in the evening. Efforts are being made to add additional full-time faculty members in career programs in place of part-time faculty when practical.

17. Of particular importance in the career fields is the related experience an instructor has in his major field and how well he is able to relate this specialized knowledge to his students in the classroom. Full-time career faculty members in the fall of 1971 had an average of eight and one-half years of related occupational experience. Part-time faculty members had an average of eleven years of related occupational experience.

18. Fifty-one (51) first year career students participated in a pilot evaluation survey conducted by ACT in the fall of 1970. Although this was not a representative sample, the student responses provided some insights concerning career faculty qualifications.

19. When asked how they would evaluate the knowledge their teachers possess about their specialized fields, 98% of the 51 first year students stated that most or many of their teachers were knowledgeable of their subject. When asked to evaluate their instructors ability to convey an understanding of their specialized fields, 94% indicated that most or many of their instructors taught well.

20. Although a formal faculty advisory program was not in existence during the fall of 1970, three out of four of the 51 career students indicated that faculty advisement was extremely valuable or worthwhile. In the fall of 1971, a formalized Faculty Advisement Program was introduced by the Student Services Division. Such a formalized advisement program should contribute to the existing strong relationship between career students and career faculty.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART II

ANALYSIS OF CAREER PROGRAMS

INTRODUCTION

This part of the long range career education plan presents an analysis of current career programs at Frederick Community College. Three primary areas of focus include (1) a follow-up survey of career graduates, (2) an employer evaluation of career graduates and (3) an examination of career faculty qualifications. Every effort was made to obtain the most recent and reliable data available concerning the above mentioned areas. Mail surveys, personal interviews, and empirical studies were utilized in collecting and analyzing the data. It should be stated that due to the limited number of graduates in specific career programs, time restrictions in collecting data and the paucity of research data available, a comprehensive analysis of current career programs was not possible. However, in the opinions of the authors, the following information on career programs and graduates

does provide valuable insight for program planning and development.

Brief Historical Survey of Career Programs

A career program, sometimes referred to as an occupational program, has been traditionally defined as one which leads to either a certificate or an Associate of Arts degree and prepares a student for immediate employment upon graduation from a community college. Throughout Part II of the long-range career education plan, the above rather restrictive definition of career programs will be used. The addition of career programs at Frederick Community College has been a relatively recent development in the history of the College. The accounting and business curriculum was the first career program offered by the College. In 1967, four additional career programs were offered: electronics technology, science laboratory technology, secretarial science, and nursing education. Data processing was offered during the 1968-1969 academic year. Business studies was divided into two career programs, one in business accounting and one in business management for the 1969-1970 academic year.

Enrollment (full and part-time) in career programs has almost doubled since 1967, from an enrollment of 212 students in the fall of 1967 to 394 students in the fall

of 1971. Full-time student enrollment in career programs has more than tripled during this period, from 51 career students in 1967 to the current enrollment of 165 students. Part-time enrollment in career programs has increased by 42%, from 161 part-time students in 1967 to 229 part-time students in 1971. Table 1 indicates the enrollment trends (full and part-time) by curriculum from 1967-1971.

Of the six programs presently in existence, five have demonstrated growth in full-time enrollment during this period. The Data Processing program, beginning with the 1970-71 academic year, has exhibited a general decrease in full-time enrollment.

Of the 66 Associate of Arts degrees conferred by Frederick Community College in 1969, 25% were awarded to students majoring in career fields; in 1970 the total number of degrees granted increased to 77 of which 35% were awarded to students in career fields; and in 1971, 40% of the 109 A.A. graduates were in career fields. The average proportion of all A.A. degrees awarded in 1971 by the sixteen Maryland community colleges to students in career programs was 29%.[2]

2. 1971 Hegis Report, Degrees and other formal awards conferred between July 1, 1970 and June 30, 1971, Maryland State Board for Community Colleges.

TABLE 1. ENROLLMENT TRENDS IN CAREER PROGRAMS FROM 1967-1971

Curriculum	1967			1968			1969			1970			1971		
	FT	PT	TOT	FT	PT	TOT	FT	PT	TOT	FT	PT	TOT	FT	PT	TOT
Business Accounting										30	60	90	21	38	59
Business Management										16	39	55	31	61	92
Business Studies	12	25	37	25	63	88	12	76	88	Revised					
Data Processing	16	46	62	42	85	127	51	76	127	23	65	88	20	33	53
Electronics Technology	0	29	29	10	40	50	11	19	33	15	21	36	16	20	36
Nursing Education	15	11	26	34	17	51	31	17	48	44	26	70	59	38	97
Science and Laboratory Technology	4	4	8	7	8	15	5	13	18	1	Discontinued				
Secretarial Science	4	46	50	5	15	20	11	36	47	16	32	48	18	39	57
Total	51	161	212	123	228	351	121	239	361	145	243	388	165	229	394

Student Services Support

Student Services has played an important role in the development of career programs at Frederick Community College by providing a variety of services designed to recognize the importance of the individual, his potentials and his aspirations. Among the services provided by seven full-time professionals include recruitment, orientation, financial aid, admissions and placement. Of particular importance to career students has been the testing and counseling program which assists the individual in appraising realistically his abilities, career aspirations and potential. Specific activities which have been provided include career day programs and high school visitations.

FOLLOW-UP SURVEY OF CAREER GRADUATES

One hundred and eleven (111) students completed career programs at the certificate or Associate of Arts level during the period 1968 through 1971.[3] To determine the present activities of these individuals and their opinions concerning the career programs, a follow-up questionnaire was forwarded to

[3] 1971 Hegis Report, Degrees and other formal awards conferred between July 1, 1970 and June 30, 1971, Maryland State Board for Community Colleges.

each graduate. (See Appendix F for sample copy of follow-up questionnaire.) Sixty-four career graduates, as shown in Table 2, completed and returned the questionnaire which is a response percentage of 58%. Approximately half of the respondents were male (52%) and half were female (48%). Three of the respondents received certificates; one in secretarial science and two in data processing.

TABLE 2. CAREER STUDENTS RECEIVING A.A. DEGREES OR CERTIFICATES BY YEAR GRADUATED

Year	Total No. Career Graduates	No. Career Graduates Responding to Survey	Percent Career Graduates Responding to Survey
1968	8	4	50%
1969	19	14	73%
1970	32	16	50%
1971	52	30	58%
Totals	111	64	58%

Table 3 provides a description of the responding career graduates by year their degree was earned and curriculum in which they were enrolled.

TABLE 3. NUMBER OF CAREER GRADUATES RESPONDING BY YEAR GRADUATED AND CURRICULUM ENROLLED

Curriculum	1968	1969	1970	1971	Curriculum Total	Percent of Total Sample
Data Processing	2	5	4	5	16	25%
Business Management		3	5	7	15	23%
Accounting	2	2		4	8	13%
Electronics Technology			1	2	3	5%
Nursing		4	5	9	18	28%
Secretarial Science			1	1	2	3%
Other	—	—	—	2	2	3%
Totals	4	14	16	30	64	100%

It can be seen that career graduates from the data processing, business management and nursing programs composed approximately 75% of the total sample. The relatively small proportions of the sample composed of graduates from the secretarial science and electronics technology programs may have been due to the limited number of graduates in these programs to date.

The post-graduation employment activities of career graduates responding to the survey are described in Table 4.

TABLE 4. POST-GRADUATION ACTIVITIES OF CAREER GRADUATES SURVEYED (1968-71)

	No. of Graduates	Percent of Total
Employed full time	54	84%
Employed part time	8	13%
Attending a transfer institution full time	1	1.5%
In the military	0	
Unemployed	1	1.5%
Total Career Graduates	64	100%

Ninety-seven percent of the graduates are employed on a full or part-time basis. Only one of the career graduates was unemployed when responding to the follow -up questionnaire. Of the graduates responding, two-thirds indicated that they are working in jobs directly related to their course of study at Frederick Community College. Approximately 20% of the graduates indicated that they have continued or plan to continue their education beyond the A.A. level.

More than a third (37%) of the career graduates responding are employed outside of Frederick County, which is approximately equivalent to the percent of the total labor force which commutes out of the County for employment. A majority of the graduates employed outside of Frederick County, work in

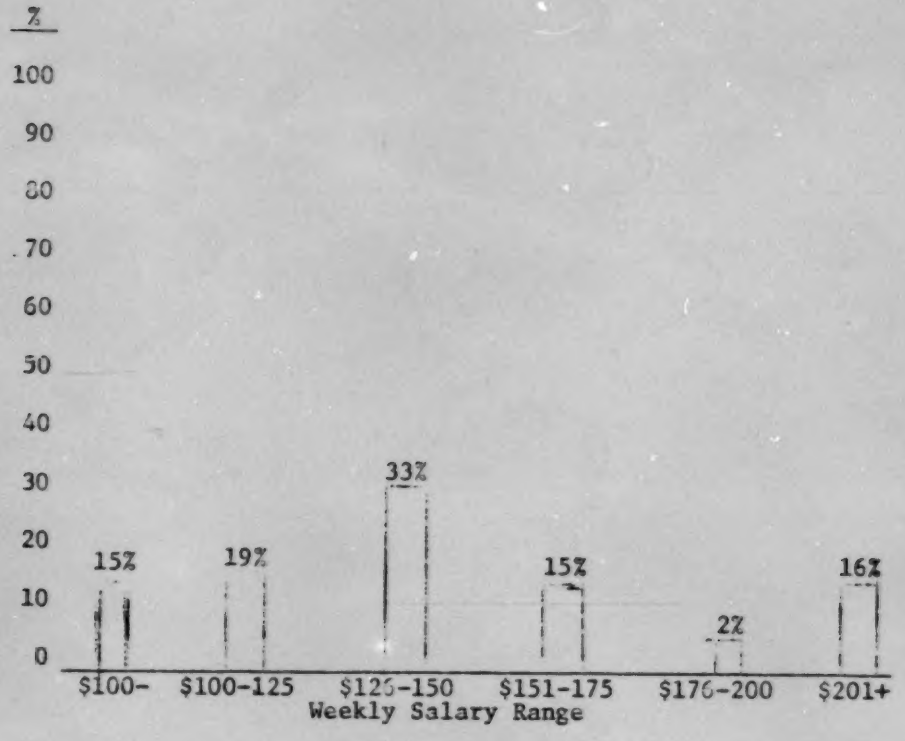
the District of Columbia or Montgomery County.

TABLE 5. LOCATION OF EMPLOYMENT OF THE CAREER GRADUATES RESPONDING TO THE FOLLOW-UP SURVEY

	Percent
Frederick County	63
District of Columbia	15
Montgomery County	8
Carroll County	8
Other Maryland counties	3
Other states	3
Total	100

A detailed analysis of salary ranges received by career graduates was not possible due to the limited number of respondents in each curriculum. However, Figure 1 presents the approximate weekly earnings of career graduates responding to the survey.

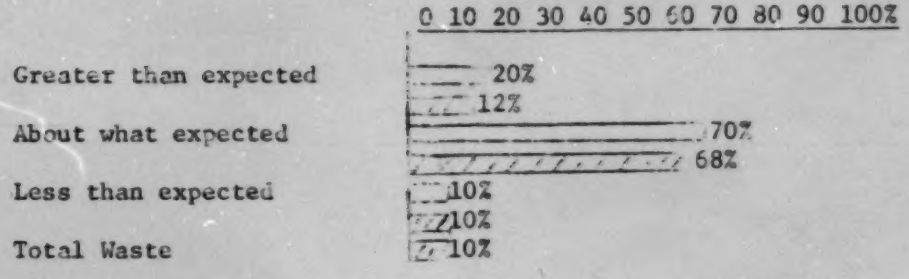
FIGURE 1. APPROXIMATE WEEKLY EARNINGS OF THE 64 CAREER GRADUATES RESPONDING



One-third of the graduates were earning $125 or less per week ($6550 or less per year); one-third earn $126-$150 per week ($6552-$7800 per year); and a third earn $151 or over per week ($7852 per year). Sixteen per cent, or approximately one out of six graduates, are into $200 per week and over range ($10,400 and over per year).

The career graduates were asked to evaluate their educational program at Frederick Community College in terms of how worthwhile they felt the career and general education courses were to their success. Figure 2 indicates that most (80-90%) of the career graduates felt that both the career and general education courses were about what they expected or greater than what they expected.

FIGURE 2. PROPORTION OF RESPONDING CAREER GRADUATES INDICATING THE VALUE OF CAREER AND GENERAL EDUCATION COURSES



When career graduates were asked whether their employer recognized their educational preparation at Frederick Community College in terms of job assignement or rate of pay, a little over half (56%) answered in the affirmative. Approximately

a third (30%) of the graduates did not think that their employer recognized fully their community college educational preparation and 14% did not respond to the question.

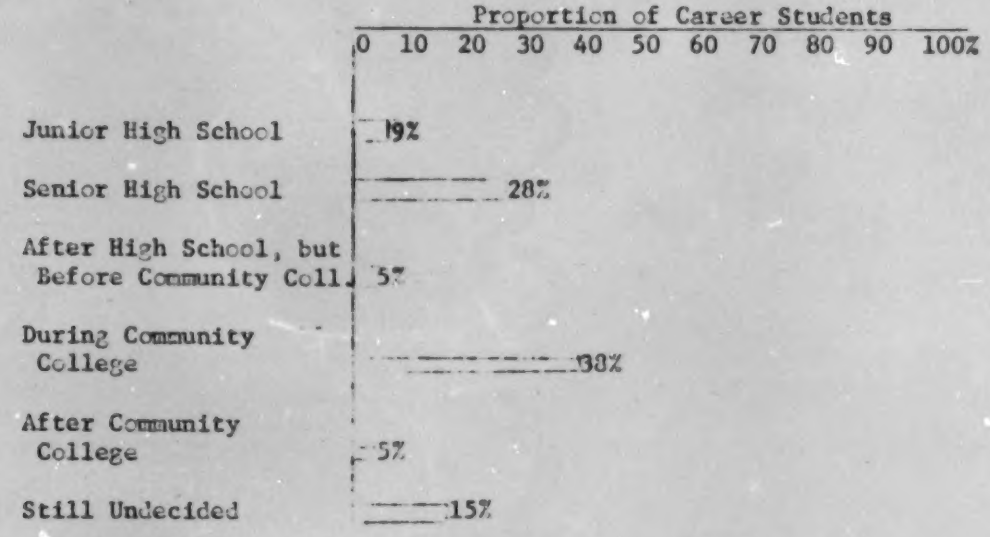
In responding to the question, "What experience while attending FCC other than classes have proven most helpful?", a majority (54%) of the career graduates rated part-time employment as being most helpful to them. Student body and/or club activities and athletic activities were rated next in importance.

The career graduates were then asked to rate those contacts which were most helpful in securing employment. Listed below, in order of importance, are those contacts found most helpful by career graduates in securing employment:

1. Found it myself
2. Friends
3. Parents or relatives
4. Community college instructor
5. Newspaper
6. Community college placement office
7. Public employment agency
8. Private employment agency

When asked at what educational level they decided on their expected vocation, over half (58%) of the career graduates responding indicated that they made their decision while attending the community college, after community college or were still undecided as to their vocational selection. Forty-two per cent made their vocational decision before entering the community college.

FIGURE 3 EDUCATIONAL LEVEL AT WHICH CAREER GRADUATES DECIDED ON THEIR VOCATION



The following general suggestions were made by career graduates for improving the career programs at Frederick Community College. These suggestions are listed in order of the greatest number of times each was mentioned.

	No. of Times Indicated
1. More specialized, in-depth courses in career areas	13
2. Providing oppoutunities for on-the-job training as part of the curricula	9
3. More discussion of employment opportunities and assistance in job placement	9
4. More clinical experience in nursing program	8
5. Provide more equipment for use in technical courses	4
6. Other (smaller class size, more relevant general education courses, closer contact with educational advisor, etc.)	9

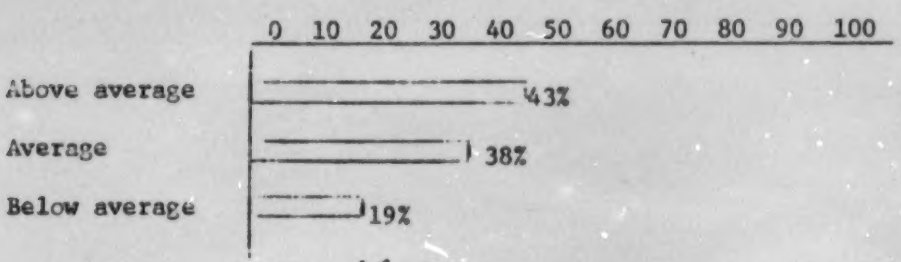
EMPLOYER EVALUATION OF CAREER GRADUATES

In order to achieve a representative employer evaluation of our career graduates, a 20% random sample of the 111 career graduates, stratified by the proportion graduated each year from 1968 through 1971, was selected. Twenty-one graduates were evaluated by their employer. A personal visit was made to each employer who agreed to provide a confidential evaluation of the career graduate. (See Appendix G for sample copy of Employer's Evaluation Form.) In each case the most immediate work supervisor was interviewed.

The average length of employment of the career graduates evaluated was approximately two years. Thirty-eight per cent had been promoted at least once since being hired and 71% of the graduates were judged by their employer as having potential for future promotion.

On an overall evaluation of the career graduates' work performance compared to similar employees who did not attend Frederick Community College, 81% of the employers rated FCC graduates as average or above average and 19% rated them as being below average.

FIGURE 4. GENERAL EVALUATION OF FCC GRADUATES' PERFORMACE AS COMPARED TO SIMILAR EMPLOYEES



The immediate work supervisor was then asked to compare FCC career graduates on the basis of personal work traits, to similar employees under their supervision who did not attend FCC.

TABLE 6. EMPLOYERS' RATING OF PERSONAL WORK TRAITS OF FCC CAREER GRADUATES COMPARED TO SIMILAR EMPLOYEES

Personal Work Traits	No. and Percent of Employer Rating Each Value								
	Excellent (1)		Above Average (2)		Average (3)		Below Average (4)		Poor (5)
	No.	%	No.	%	No.	%	No.	%	
Dependability	9	42	6	29	6	29			
Initiative	5	24	7	33	6	29	3	14	
Technical Competence	8	38	5	24	4	19	4	19	
Cooperative Attitude	8	38	9	42	3	14	1	5	
Personal Appearance	10	48	7	33	3	14	1	5	

Table 6 indicates that FCC career graduates compare very favorably with their contemporaries on the five personal work traits evaluated by their supervisors. General recommendations mentioned by employers concerning improvement of career programs at Frederick Community College include the following:

	No. of times indicated
1. More clinical experience in nursing program	7
2. Expand programs to include more on-the-job work experience	6
3. Increased emphasis on job skills and technical competence	5
4. Improve personal attributes needed for success in world of work (leadership, decision making, interpersonnal skills)	3

The demand for two-year college graduates in the career fields is increasing in Frederick and surrounding areas according to three out of four employers interviewed. An increasing acceptance of the two-year career graduate into the hierarchy of the world of work; a growing awareness that training beyond the high school level is needed for entry into and advancement in the business world and a critical need for graduates from certain career programs (i.e. allied health fields - nursing, etc.) were the primary reasons mentioned by the employers for an increase in demand for two-year college graduates.

CAREER FACULTY QUALIFICATIONS

Of the ten full-time faculty members presently teaching career courses at FCC, one has earned a doctorate, five have

master degrees, two have earned bachelor degrees plus 30 credits, and two have bachelor degrees. These faculty members received their highest degrees from the following institutitions:

	No. of Faculty
Georgetown University	1
Indiana University	1
Louisiana State University	1
Pennsylvania State University	2
University of Maryland	1
University of Pennsylvania	1
University of Pittsburgh	2
University of Vermont	1

In the fall of 1971, nine part-time instructors taught courses in career programs. The ratio of full-time to part-time faculty members in career programs was 1:.9. The table below indicates the number of full-time (FT) and part-time (PT) faculty members by career field:

TABLE 7. NUMBER OF PART-TIME AND FULL-TIME FACULTY MEMBERS BY CAREER FIELDS

	Full-Time	Part-Time
Business Management	1	4
Accounting	1	2
Data Processing	1	
Secretarial Science	1	1
Insurance		1
Electronics Technology	1	
Technical Drawing		1
Nursing	5	
Total	10	9

The average number of years teaching experience of full-time faculty members in career programs, before coming to FCC, was five years. Four out of ten full-time faculty members have had previous teaching experience in a two-year college, four have taught at four-year colleges, and four have had experience in secondary school teaching. It should be noted that some of the faculty members have taught at more than one level

Of particular importance in the career fields is the related experience an instructor has in his major field of teaching and how well he is able to relate this specialized knowledge to his students in the classroom.

"Career faculty members are generally highly specialized, oriented toward their subject fields, and qualified by occupational experience. The general success of technical educational programs at the community college level is always directly related to maintaining high personnel standards and the growing recognition for occupational proficiency of occupational instructors."[4]

Full-time faculty teaching in career programs in the fall of 1971 had an average of eight and one-half years of related occupational experience in their specialized programs. Part-time instructors had an average of eleven years of

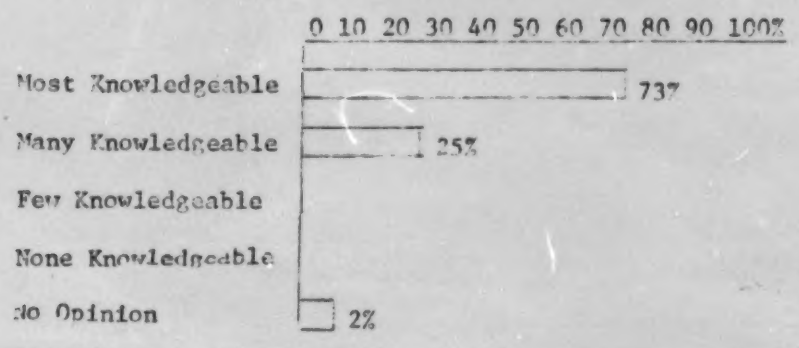
4. Norman Harris. Emphasis. Occupational Education For the Two Year College, p. 24

related occupational experience. According to Dr. Norman Harris, a well-qualified career instructor should have seven years or more of successful occupational preparation and experience.[5]

A sample of 51 first-year career students participated in a pilot evaluation survey during the fall and winter months of 1970.[6] Although the sample was limited, the authors feel that the data does provide some insight concerning the qualifications of career faculty.

When asked how would they evaluate the knowledge their teachers possess about their fields, 73% of the students responded that most of their instructors were knowledgeable about their field, and 25% indicated that many are knowledgeable.

FIGURE 4. DISTRIBUTION OF INSTRUCTORS' KNOWLEDGE ABOUT HIS FIELD

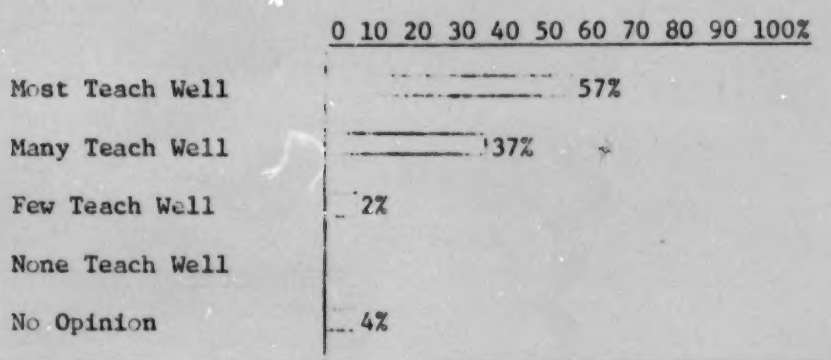


[5] Ibid.

[6] In the fall of 1970, Frederick Community College participated in a pilot Career Planning Profile study conducted by the American College Testing Service. The above-mentioned data refers to a follow-up questionnaire which was part of the Career Planning Profile study.

When asked to evaluate their instructors' ability to convey an understanding of their specialized fields, 57% indicated that most of their instructors taught well, and 37% indicated that many teach well.

FIGURE 6. DISTRIBUTION OF INSTRUCTORS ABILITY TO CONVEY UNDERSTANDING



When asked their opinion of faculty advising, 76% of the career graduates surveyed found faculty advisement to be extremely valuable or worthwhile; even though a formal faculty advisement program did not exist during the 1970-1971 academic year.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART III

A PLAN OF ACTION

Fall, 1971

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LONG-RANGE CAREER EDUCATION PLAN
FOR
FREDERICK COMMUNITY COLLEGE

A PLAN OF ACTION

GOALS FOR CAREER EDUCATION	INTERMEDIATE OBJECTIVE (Three to Five Year)	LONG-RANGE OBJECTIVE (Ten Year)
1. To develop a greater awareness of and interest in career programs at Frederick Community College among high school students and adults in the County.	1.1 Develop and disseminate a Career Newsletter to secondary school counselors, administrators, community and business representatives, or interested individuals. 1.2 Prepare a career slide series and video tape presentation for use in classroom and group meetings. 1.3 To conduct at least two New Career Workshops per year for students and adults to assist them in exploring and preparing for new occupations and job opportunities.	1.11 Develop a career information distribution program, including computerization and closed circuit television for use throughout the County. 1.12 To establish full-time New Career Centers in several locations in Frederick County.
2. Increase efforts to provide programs and services to correct educational deficiencies and handicaps which prevent individuals from benefiting from instruction essential to initial employment or re-employment	2.1 Establish a Pre-Career Program which allows the student to: a. acquire remedial work for entry into the career program of his choice. b. develop a saleable skill necessary for initial employment or re-employment. c. explore different career fields and options open to them through individual and group career counseling.	2.11 To provide a Pre-Career Program in each New Career Center throughout the County to enable any student or adult to prepare for initial employment or re-employment.

GOALS FOR CAREER EDUCATION	INTERMEDIATE OBJECTIVE	LONG-RANGE OBJECTIVE
3. Adopt in all career programs teaching methodology and evaluation techniques based upon operationally stated objectives and individual student differences in performance and rate of learning.	3.1 Include in each career program more individualization of education through a wider variety of known learning strategies which can be stated operationally in terms of cognitive, affective, and psychomotor competencies.	3.11 To implement the "zero reject" concept as set forth by the President's Advisory Council on Vocational Education which assumes among other things, that when performance objectives are stated clearly, it is possible to utilize discipline components to build a mix amendable to the student's own learning strategy.
	3.2 Prepare operationally State objectives for each course taught in career programs.	
4. Develop a wider variety of types and levels of career programs in business, technology, allied health, public service, and agricultural fields through more efficient use of community resources, facilities, and innovative approaches to curriculum structure.	4.1 Develop and offer at least two new career programs in each of the following career fields or clusters: Public Service, Business and Technology, Allied Health Services.	4.11 Provide a choice of career programs and options to meet the needs of all students and adults in Frederick County which will provide a highly qualified source of skilled technicians and paraprofessionals for business, industry, government, and public service agencies.
	4.2 Offer at least one concentrated career program in each career cluster which is designed to be offered in the day or evening programs whenever interest and enrollments justify them.	4.12 Establish a Vocational-Technical Skill Center to teach specialized vocational skills which cannot be taught in existing Skill Training Centers.
	4.3 Develop five Skill Training Centers for teaching advanced or specialized skills using existing community or business facilities and resources.	
	4.4 Incorporate a curriculum organizational model based on a core curriculum or cluster approach (see Appendix H) which allows for maximum flexibility and individualization of career development throughout life.	

GOALS FOR CAREER EDUCATION	INTERMEDIATE OBJECTIVE	LONG-RANGE OBJECTIVE
5. Develop a comprehensive career guidance program which assists students and adults alike in career planning, decision making, and adjustment throughout life, not just during their formal school years.	5.1 Establish a Career Development Center to provide informational resources on occupational requirements, individual and group career counseling, testing, and placement services. 5.2 Obtain State and Federal funding to finance at least 50% of the cost of the Career Development Center.	5.11 Integrate all counseling and instructional services using a Career Development Model which assumes that students at all educational levels and stages of development are preparing for the world of work.
6. Prepare students for relevant careers which are based upon changing technology and economic trends, rather than geographic boundaries.	6.1 Develop and implement a model for determining new career programs which is based on student interest and socioeconomic trends as well as regional manpower supply or demand needs.	6.11 Provide career programs which reflect as nearly as possible changing occupational interests of students and adults and national economic and social priorities.
7. Increase business and community involvement in career education, to include greater use of advisory committees in planning and evaluating career programs, development of supervised work experience or cooperative education opportunities and needed continuing education programs.	7.1 Expand representation on present career advisory committees and develop career advisory committees for each new career program. 7.2 Establish a formal liaison between the County Vocational-Technical Council, State Vocational-Technical Council, and FCC Career Advisory Committees. 7.3 Hire a Cooperative Education Specialist and develop at least four cooperative education programs.	7.11 Increase involvement of business and community representatives in all career programs, paraprofessional and pre-professional, in order to realize the full potential of the career development model of education for the world of work.

GOALS FOR CAREER EDUCATION	INTERMEDIATE OBJECTIVE	LONG-RANGE OBJECTIVE
8. Improve articulation, both horizontally (between community colleges) and vertically (between secondary schools, State agencies, and four-year colleges), in career programs to reflect planning from secondary schools through the community colleges, or beyond.	8.1 Establish a career articulation committee made up of representatives of secondary and post-secondary educational institutions in Frederick County to meet on a regular basis to improve articulation. 8.2 Establish a community college career coordination planning group to improve program planning and coordination of career programs in Central Maryland community colleges.	8.11 Create open opportunities for horizontal and vertical mobility in light of discovered needs, interests, and ability for all students and adults in Frederick County.
9. Prepare students and adults to obtain gainful employment compatible with their interests and intellect and which culminates in job placement of graduates commensurate with their skills and training.	9.1 Develop and offer a Career Orientation Course in each career cluster to be required, which assist students in analyzing their abilities and interest and exploring career opportunity and requirements. 9.2 Develop a Career Placement and Follow-up Program to be administered from the Career Development Center in cooperation with the College Research Specialist to evaluate success of career graduates (or dropouts).	9.11 Provide guidance, placement, and instructional programs to assist any student or adult to develop their potential and obtain meaningful employment.

GOALS FOR CAREER EDUCATION	INTERMEDIATE OBJECTIVE	LONG-RANGE OBJECTIVE
10. Develop our present career program to their fullest by continuous evaluation and revision of all programs.	10.1 Evaluate each career program on an annual basis using the career program evaluation paradigm in Appendix I. 10.2 Determine financial sources for career programs and obtain funds for at least 50% of the direct cost of each program.	10.11 Provide continuous evaluation, to include cost-effectiveness analysis for all career programs. 10.12 Obtain financial assistance for at least 60 to 70% of direct cost of each career program.

LONG-RANGE CAREER EDUCATION PLAN

FOR

FREDERICK COMMUNITY COLLEGE

PART III

A PLAN OF ACTION

INTRODUCTION

The previous two parts of the Long-Range Career Education Plan were concerned with determining the goals for career education and with analyzing the present career programs. The purpose of this part of the career education plan is to state objectives, both intermediate and long term, designed to accomplish the stated goals for career education at Frederick Community College.

This plan of action is designed to provide the general framework which is necessary for systematic planning, organizing and evaluating career education activities, and is not intended to provide finalized procedures for carrying out these activities. Systematic planning, to be effective, must be a dynamic continuous process of setting goals, establishing objectives, evaluating results and reviewing priorities. It is to this end that the following plan of action is aimed.

BASIC ASSUMPTIONS OF CAREER EDUCATION

Underlining the stated goals and objectives of career education in this plan of action are certain basic assumptions

which should be stated. Although these assumptions are not all inclusive, they do provide a common base to use in interpreting the concepts and objectives outlined in this long-range career education plan.

1. "Career education, if it is to have relevance in a free, progressive, and technically competent society must be seen within the total context of education as preparation for a "career" or "vocation," whether one chooses the life of a mechanic, a lawyer, a medical technician, or the professional scholar."

This assumption precludes program limitations as they now exist in many instances, and establishes the need for a broader and more inclusive approach to education based upon an individual's needs and occupational opportunities. Such planning puts greater emphasis on the objectives of an educational program rather than on the process itself.

2. "Career education is a continuous process involving the full range of educational endeavors from early childhood throughout life."

This assumption establishes the base for the schools to become responsible for the student in transition to the next level of education or to work. The career education model recently developed by the U. S. Office of Education (see Appendix J, page 87) and endorsed by Commissioner Marland divides the process roughly into four phases which prescribe themselves to general levels of education.

a. Career Awareness - Elementary

b. Orientational and Exploration - Junior High School

c. Preparation and Specialization - Senior High School

d. Specialization, Upgrading, and Retraining - Post High School

The phases, of necessity, do and should overlap to accommodate individual needs at a given time, and provide every student with the skills necessary to give him a start in making a livelihood, whether he leaves school before finishing high school or at the end of a doctoral program.

3. "The goals of career education are not inconsistent with other concepts of the aims of education, including personal enlightenment, social development, attainment of skills, or exploration of the realms of knowledge, but give them focus."

This assumption eliminates the artificial barrier or dichotomy which oftens exist between the goals of vocational education, and general education. The attainment of vocational competencies or skills cannot take place without sound general education, and general education does not exist when it does not include vocational preparation.

4. "Career education is a responsibility of the total educational institution and cannot be limited to a single discipline or department."

While responsibility for career education is centrally located with the President of the College, it is the responsibility of the total administration to encourage all elements of the institution to contribute to the commitment of career

education. This will require instructional, student services, and administrative planning which articulates between levels of education and provides maximum opportunity for the student to attain his desired and optimum development. Through such articulation, the transition of the student to the next educational level or to work will be more efficient and effective.

GOALS AND OBJECTIVES

The goals for career education represent general areas or targets of importance which should receive special emphasis and efforts in the decade ahead. These goals, as explained in Part I, were derived from a consensus of opinions of over a hundred educational, business, and industry and community representatives in the fall of 1971. These goals are not intended to replace or supplant other educational goals of the College, but are intended to supplement them.

The intermediate and long-range objectives outlined in this plan of action are recommended by the authors as specific activities and programs which, when accomplished, will contribute significantly toward reaching the desired goals. It should be emphasized that these objectives should be reviewed and revised on a continuous basis.

CONCEPTS AND RATIONALE

The intermediate and long-range objectives outlined in the plan of action are, in some cases, self-explanatory: in

other instances a great deal of research or additional study will be required before they can be fully implemented. The following summary of career education goals and objectives will give a brief explanation of the major concepts and rationale involved.

Goal No. 1: To develop a greater awareness of and interest in career programs at Frederick Community College among high school students and adults in the County.

Objectives:

1.1 Develop and disseminate a Career Newsletter to secondary school counselors, administrators, community and business representatives, or interested individuals.

Rationale:

More direct communications concerning career programs with secondary school counselors, teachers, and administrators, as well as community and business organizations and leaders, is needed. A periodic newsletter issued from the Dean for Instructional Services office with short, concise, and pertinent information on career education subjects, both local and National, would help provide this.

1.2 Prepare a career slide series and video tape presentation for use in classroom and group meetings.

Rationale:

Instructors, counselors, and administrative personnel are encouraged to speak to community organizations and

school groups. A well-prepared slide series on each career program would be useful for such meetings. Many secondary schools have video tape, close circuit television, or video casset capibilities on which preparedcolor or black and white video tapes could be used.

1.3 To conduct at least two New Career Workshops per year for students and adults to assist them in exploring and preparing for new occupations and job opportunities.

Rationale:

Advancements in technology and continuous changes in social and economic conditions make many occupations obsolete and create new career opportunities yearly. It is estimated that the average worker changes his job or occupation five or six times during his work-life span and many are unable to make a transition to new careers because of a lack of information and training. The New Careers Workshop and eventually, the New Career Centers,will bring together industry and education to assist these individuals in exploring new career opportunities.

Goal No. 2: Increase efforts to provide programs and services to correct educational deficiencies and handicaps which prevent individuals from benefiting from instruction essential to initial employment or re-employment.

Objectives:

2.1 Establish a Pre-Career Program which allows the student to: (a) acquire remedial work for entry into the career program of his choice (b) develop a saleable skill necessary for initial employment or re-employment (c) explore different career fields and options open to them through individual and group career counseling.

Rationale:

Many students leave secondary school without the necessary educational skills or preparation needed to enter the world of work or succeed in technical or vocational career programs. Many adults, also, are unable to take advantage of job opportunities or enroll in instructional programs because of these educational handicaps. A Pre-Career Program, designed to assist the students to acquire deficient basic educational competencies and, more important, to provide him with a saleable skill necessary for initial employment or re-employment is needed.

Goal No. 3: Adopt in all career programs teaching methodology and evaluation techniques based upon operationally stated objectives and individual student differences in performance and rate of learning.

Objectives:

3.1 Include in each career program more individualization of education through a wider variety of known learning strategies which can be stated operationally in terms of cognitive, affective, and psychomotor competencies.

Rationale:

The fact that individuals learn at different rates and respond to different learning situations and stimuli in differing ways is a fundamental proposition in learning theory. How to best structure the learning situation and determine which teaching strategy to use in order to compensate for these individual differences is less well defined or accepted. It is generally accepted, however, that the state of the art of education today makesmore individualization of education possible through a variety of known learning strategies, even though much more research is needed in this field. The key element in this approach is the establishment of valid learning outcomes, or terminal behaviors, which can be stated in terms of cognitive, affective and psychomotor competencies.

Goal No. 4: Develop a wider variety of types and levels of career programs in business, technology, allied health, public service, and agricultural fields through more efficient use of community resources, facilities, and innovative approaches to curriculum structure.

Objectives:

4.1 Develop and offer at least two new career programs in each of the following career fields or clusters: Public Service, Business and Technology, Allied Health Services.

Rationale:

There is need for new career programs or options to present programs which provide viable alternatives for students, depending on their interest and abilities, and which offer meaningful career opportunities in the future. However, proliferation of career programs, which may look attractive in catalogs, but for which the present or future opportunities for graduates is questionable, should be avoided. The factors to be considered in determining new programs are explained in Goal 6, on page 60. Projected business and economic trends for Frederick County and the Metropolitan Washington area, as well as in other parts of the County, indicate that the need for highly qualified professional and technical workers in the Public Service, Business and Technologies and Allied Health areas will increase steadily in the next decade.

4.2 Offer at least one career program in each career cluster which is designed to be offered in the Continuing Education Program.

Rationale:

The number of individuals attending continuing education classes is increasing each year. Greater opportunities should be provided for people who work full time, but who wish to continue their education in order to improve themselves by upgrading present job skills or by developing new job skills.

4.3 Develop five Skill Training Centers for teaching advanced or specialized skills using existing community or business facilities and resources.

Rationale:

Laboratories are, in most cases, classroomsdesigned to provide a learning situation where a student can apply certain principles or practice techniques and skills which he will need to know in the future. They often simulate as closely as possible the actual work situation or shop, but are very costly and easily outdated. The Skill Training Center concept involves a cooperative venture between an educational institution and a community or business firm whereby actual space in the local facilities could be used as a teaching laboratory for specialized skills.

Goal No. 5: Develop a comprehensive career guidance program which assists students and adults alike in career planning, decision making, and adjustment throughout life, not just during their formal school years.

Objectives:

5.1 Establish a Career Development Center to provide informational resources on occupational requirements, individual and group career counseling, testing, and placement services.

Rationale:

Based on the four assumptions stated earlier in Part III, it is evident that career education pertains to the majority of students and adults attending a community college, many of whom are preparing for eventual entry into the world of work or seek career reorientation and updating. Therefore, a concerted effort should be made to increase student and adult enrollment in college programs consistent with the individual's unique characteristics in relation to an accurate career informational base. The individual's needs should be the basic determinant of career choice and should not be prejudiced by labor market information nor limited to the programs offered by the College.

5.2 Obtain State and Federal funding to finance at least 50% of the cost of the Career Development Center.

Rationale:

The costs of planning, organizing, and staffing a Career Development Center will necessitate the acquisition of Federal and State funds.

Goal No. 6: Prepare student for relevant careers which are based upon changing technology and economic trends, rather than geographic boundaries.

Objectives:

6.1 Develop and implement a model for determining new career programs which is based on student interest and socioeconomic trends as well as regional manpower supply or demand needs.

Rationale:

In a technological society, characterized by a fluctuating economy and a changing socioeconomic structure, the need for systematic and continuous planning is important. Thus, a planning model for determining new career programs which maximizes the value of the taxpayers' dollar should be developed. This model should encompass the need for career education programs at both the secondary and post-secondary levels in order to insure maximum articulation and preparation of qualified graduates.

Goal No. 7: Increase business and community involvement in career education, to include greater use of advisory committees in planning and evaluating career progarams, development of supervised work experience or cooperative education opportunities and needed continuing education programs.

Objectives:

7.1 Expand representation on present career advisory committees and develop career advisory committees for each new career program.

Rationale:

Advisory committees should represent a wide spectrum of expertise and experience in the various career fields. A continuous effort should be made to insure an input of the latest technological changes and developments from business and industrial leaders.

Goal No. 8: Improve articulation, both horizontally (between community colleges)and vertically (between secondary schools, State agencies, and four-year colleges), in career programs to reflect planning from secondary schools through the community colleges, or beyond.

Objectives:

8.1 Establish a career articulation committee made up of representatives of secondary and post-secondary educational institutions in Frederick County to meet on a regular basis to improve articulation.

Rationale:

To insure that students are able to progress easily from one level of education to the next or change from one career curriculum to another, a formal planning group should be established which includes instructors, counselors, and administrators from secondary as well as post-secondary institutions.

8.2 Establish a community college career coordination planning group to improve program planning and coordination of career programs in Central Maryland community colleges.

Rationale:

The establishment of a regional planning group of Central Maryland community colleges would enhance program articulation which would enable students to choose from a wider variety of specialized career programs. Also, a regional concept of program planning would be more economical to all participating colleges and duplication of costly career programs could be minimized.

Goal No. 9: Prepare students and adults to obtain gainful employment compatible with their interests and intellect and which culminates in job placement of graduates commensurate with their skills and training.

Objectives:

9.1 Develop and offer a Career Orientation Course in each career cluster to be required, which assist students in analyzing their abilities and interest and exploring career opportunity and requirements.

Rationale:

Career graduates responding to the follow-up survey indicated that career programs could be improved by

a greater discussion of employment opportunities relevant to the various programs. A Career Orientation Course offered in each cluster of programs would enable student to explore the job opportunities, advancement prospects, etc. in each program prior to choosing the specific career program he would pursue.

9.2 Develop a Career Placement and Follow-up Program to be administered from the Career Development Center in cooperation with the College Research Specialist to evaluate success of career graduates (or dropouts).

Rationale:

Career graduates indicated that more assistance was needed in career placement. Undoubtedly, placement of graduates in positions commensurate with their field of study is important to the success of the career programs. To determine the employment activities and opinions of graduates, an extensive Follow-up Program is necessary. The continuous feedback from graduates will allow for the input of valuable suggestions and comments.

Goal No. 10: Develop our present career program to their fullest by continuous evaluation and revision of all programs.

Objectives:

10.1 Evaluate each program on an annual basis using the career program evaluation paradigm in Appendix I.

Rationale:

As stated earlier, the need for systematic planning and evaluation is essential. A systematic evaluation program such as the one indicated in Appendix I will require that each career program be examined in light of stated goals and objectives, thus insuring accountability for the desired outcomes.

10.2 Determine financial sources for career programs and obtain funds for at least 50% of the direct cost of each career program.

Rationale:

Under the Vocational Education Act of 1963, vocationally-oriented career programs are eligible for reimbursement by the State and Federal Government of up to 50% of the total costs on a matching basis. However, in the past, limitations in vocational funds allotted by Congress and subsequently the Maryland State Department of Vocational Education, have fallen short of the amount needed at Frederick Community College. In order to develop new programs and expand our present programs without adding financial restrictions on other college programs, additional avenues should be explored for obtaining funds.

APPENDIX A

NAME: _____ *

DELPHI QUESTIONNAIRE I

While your suggestions may well apply to career education programs in general, insofar as is possible, please utilize your understanding of the unique potentialities of the Career Education Program of Frederick Community College. Each response should be brief, preferably five or six words in length. Broad generalities are not helpful; a concise statement of a target of high importance is needed. A target is defined as what we should do, i.e., a goal which the Career Education Program should undertake for the good of the community or society in general. We are not soliciting suggestions for how or why the target should be pursued. Please complete the following sentence by suggesting no fewer than one nor more than five target areas listed below.

IN THE NEXT DECADE, THE CAREER EDUCATION PROGRAM OF FREDERICK COMMUNITY COLLEGE SHOULD CONCENTRATE ITS ENERGIES AND RESOURCES ON:

1. INCREASING _____
2. SOLVING _____
3. DEVELOPING _____
4. PREPARING _____
5. ( ) _____

Please return this form in the enclosed envelope not later than October 11, 1971.

*Names will not be used in published tabulations.

APPENDIX B

Name_____

DELPHI QUESTIONNAIRE II

High Low

(1 2 3 4 5) 1. Developing programs that reflect planning for a career from grade 9 through two years at Frederick Community College.

(1 2 3 4 5) 2. Preparing programs to assist individuals in career planning and decision making.

(1 2 3 4 5) 3. Developing forecasting procedures that reflect changes in local employment demand and supply.

(1 2 3 4 5) 4. Increasing efforts to develop career training programs for under-educated and under-employed.

(1 2 3 4 5) 5. Increasing remedial and/or tutorial programs to enable all students to benefit from career courses.

(1 2 3 4 5) 6. Developing a wider variety of non-credit, vocational/technical courses to be offered in continuing educational program.

(1 2 3 4 5) 7. Increasing community awareness and understanding of career programs at Frederick Community College.

(1 2 3 4 5) 8. Providing more career information for secondary schools.

(1 2 3 4 5) 9. Increasing business/community involvement in career program planning and evaluation.

(1 2 3 4 5) 10. Developing evaluation techniques that are based more on measurable goals.

(1 2 3 4 5) 11. Increasing enrollment of career students in relation to students in transfer programs.

(1 2 3 4 5) 12. Preparing people to obtain gainful employment compatible with their interest and intellect.

(1 2 3 4 5) 13. Work with employers to insure job placement of Frederick Community College graduate commensurate with their skill and training.

(1 2 3 4 5) 14. Preparing students for careers anywhere, not just in Frederick County.

High Low

(1 2 3 4 5) 15. Developing career programs to meet specific needs of Frederick County employers.

(1 2 3 4 5) 16. Developing programs which achieve immediate student goals.

(1 2 3 4 5) 17. Preparing students for occupations that will be found a decade from now.

(1 2 3 4 5) 18. Preparing adults for orderly re-training from one field to another due to economic and technological changes.

(1 2 3 4 5) 19. Preparing students to go on to higher education in career field.

(1 2 3 4 5) 20. Developing an awareness that college is not the end of education.

(1 2 3 4 5) 21. Developing our present career programs to their fullest.

(1 2 3 4 5) 22. Developing core courses that apply to a cluster of occupations.

(1 2 3 4 5) 23. Developing a technical or vocational center for career programs.

(1 2 3 4 5) 24. Increasing efforts to obtain additional grants or financial sources for career programs.

(1 2 3 4 5) 25. Develop more innovative teaching methodology which take into consideration individual student differences.

(1 2 3 4 5) 26. Conducting follow-up studies to provide relevant feedback on past graduates of career programs.

(1 2 3 4 5) 27. Preparing students for careers through greater use of supervised work experience or cooperative education programs.

(1 2 3 4 5) 28. Developing curriculums that will attract new job opportunities (industrial, commercial, government) to this area.

(1 2 3 4 5) 29. Develop a broad base of career programs rather than specialize in a few areas.

High Low

(1 2 3 4 5) 30. Developing more interest in Frederick Community College career programs at high schools.

(1 2 3 4 5) 31. Solving the problem of non-transferability of the career courses.

(1 2 3 4 5) 32. Developing regional articulation procedures between career programs at different community colleges.

APPENDIX C

Name _____

DELPHI QUESTIONNAIRE III

High Low

(1 2 3 4 5) 1. Developing programs that reflect planning for a career from grade 9 through two years at Frederick Community College.
Reason: _____

(1 2 3 4 5) 2. Preparing programs to assist individuals in career planning and decision making.
Reason: _____

(1 2 3 4 5) 3. Developing forecasting procedures that reflect changes in local employment demand and supply.
Reason: _____

(1 2 3 4 5) 4. Increasing efforts to develop career training programs for under-educated and under-employed.
Reason: _____

(1 2 3 4 5) 5. Increasing remedial and/or tutorial programs to enable all students to benefit from career courses.
Reason: _____

(1 2 3 4 5) 6. Developing a wider variety of non-credit, vocational/technical courses to be offered in continuing educational program.
Reason. _____

(1 2 3 4 5) 7. Increasing community awareness and understanding of career programs at Frederick Community College.
Reason. _____

(1 2 3 4 5) 8. Providing more career information for secondary schools.
Reason: _____

(1 2 3 4 5) 9. Increasing business/community involvement in career program planning and evaluation.
Reason: _____

High Low

(1 2 3 4 5) 10. Developing evaluation techniques that are based more on measurable goals.
Reason: _____

(1 2 3 4 5) 11. Increasing enrollment of career students in relation to students in transfer programs.
Reason: _____

(1 2 3 4 5) 12. Preparing people to obtain gainful employment compatible with their interest and intellect.
Reason: _____

(1 2 3 4 5) 13. Work with employers to insure job placement of Frederick Community College graduate commensurate with their skill and training.
Reason: _____

(1 2 3 4 5) 14. Preparing students for careers anywhere, not just in Frederick County.
Reason: _____

(1 2 3 4 5) 15. Developing career programs to meet specific needs of Frederick County employers.
Reason: _____

(1 2 3 4 5) 16. Developing programs which achieve immediate student goals.
Reason: _____

(1 2 3 4 5) 17. Preparing students for occupations that will be found a decade from now.
Reason: _____

(1 2 3 4 5) 18. Preparing adults for orderly re-training from one field to another due to economic and technological changes.
Reason: _____

High Low

(1 2 3 4 5) 19. Preparing students to go on to higher education in Career field.
Reason:_____

(1 2 3 4 5) 20. Developing an awareness that college is not the end of education.
Reason:_____

(1 2 3 4 5) 21. Developing our present career programs to their fullest.
Reason:_____

(1 2 3 4 5) 22. Developing core courses that apply to a cluster of occupations.
Reason:_____

(1 2 3 4 5) 23. Developing a technical or vocational center for career programs.
Reason:_____

(1 2 3 4 5) 24. Increasing efforts to obtain additional grants or financial sources for career programs.
Reason:_____

(1 2 3 4 5) 25. Develop more innovative teaching methodology which take into consideration individual student differences.
Reason:_____

(1 2 3 4 5) 26. Conducting follow-up studies to provide relevant feedback on past graduates of career programs.
Reason:_____

(1 2 3 4 5) 27. Preparing students for careers through greater use of supervised work experience or cooperative education programs.
Reason:_____

High Low

(1 2 3 4 5) 28. Developing curriculums that will attract new job opportunities (industrial, commercial, government) to this area.
Reason: _____

(1 2 3 4 5) 29. Develop a broad base of career programs rather than specialize in a few areas.
Reason: _____

(1 2 3 4 5) 30. Developing more interest in Frederick Community College career programs at high schools.
Reason: _____

(1 2 3 4 5) 31. Solving the problem of non-transferability of the career courses.
Reason. _____

(1 2 3 4 5) 32. Developing regional articulation procedures between career programs at different community colleges.
Reason: _____

APPENDIX D

SUMMARY OF MODAL CONSENSUS RATIONS

DELPHI QUESTIONNAIRE III

CAREER EDUCATION STUDY, FREDERICK COMMUNITY COLLEGE
January 1, 1972

Goal No.	Goal Statement	Distribution of Ratings 1	2	3	4	5	Total	Consensus Percent
1.	Developing programs that reflect planning for a career from grade 9 through two years at Frederick Community College.	13	8	75	2	8	106	71%
2.	Preparing programs to assist individuals in career planning and decision making.	10	83	4	7	2	106	78%
3.	Developing forecasting procedures that reflect changes in local employment demand and supply.	10	11	67	11	7	106	62%
4.	Increasing efforts to develop career training programs for under-educated and under-employed.	16	68	6	11	5	106	64%
5.	Increasing remedial and/or tutorial programs to enable all students to benefit from career courses.	9	72	9	9	7	106	68%
6.	Developing a wider variety of non-credit, vocational/technical courses to be offered in continuing educational program.	10	7	66	9	14	106	62%
7.	Increasing community awareness and understanding of career programs at Frederick Community College.	12	78	6	6	4	106	74%
8.	Providing more career information for secondary schools.	13	11	71	4	7	106	67%
9.	Increasing business/community involvement in career program planning and evaluation.	21	11	65	4	5	106	61%
10.	Developing evaluation techniques that are based more on measurable goals.	16	8	69	5	8	106	65%
11.	Increasing enrollment of career students in relation to students in transfer programs.	6	6	75	4	15	106	71%

Goal No.	Goal Statement	Distribution of Ratings 1	2	3	4	5	Total	Consensus Percent
12.	Preparing people to obtain gainful employment compatible with their interest and intellect	77	12	8	7	2	106	73%
13.	Work with employers to insure job placement of Frederick Community College graduate commensurate with their skill and training.	10	80	9	6	5	106	76%
14.	Preparing students for careers anywhere, not just in Frederick County.	81	1	13	5	6	106	76%
15.	Developing career programs to meet specific needs of Frederick County employers.	8	12	72	2	12	106	68%
16.	Developing programs which achieve immediate student goals.	12	7	78	4	5	106	74%
17.	Preparing students for occupations that will be found a decade from now.	7		82	4	13	106	77%
18.	Preparing adults for orderly re-training from one field to another due to economic and technological changes.	6	87	6	6	1	106	82%
19.	Preparing students to go on to higher education in Career field.	8	10	83	1	4	106	78%
20.	Developing an awareness that college is not the end of education.	24	5	69	1	7	106	65%
21.	Developing our present career programs to their fullest.	101	2	12	1		106	95%
22.	Developing core courses that apply to a cluster of occupations.	8	81	3	6	8	106	76%
23.	Developing a technical or vocational center for career programs.	12	70	3	9	12	106	66%
24.	Increasing efforts to obtain additional grants or financial sources for career programs.	14	85	2	2	3	106	80%
25.	Develop more innovative teaching methodology which takes into consideration individual student differences.	19	5	71	5	6	106	67%

Goal No.	Goal Statement	Distribution of Ratings 1	2	3	4	5	Total	Consensus Percent
26.	Conducting follow-up studies to provide relevant feedback on past graduates of career programs.	11	12	77	2	4	106	73%
27.	Preparing students for careers through greater use of supervised work experience or cooperative education programs.	11	74	6	12	3	106	70%
28.	Developing curriculums that will attract new job opportunities (industrial, commercial, government) to this area.	11	13	8	3	71	106	67%
29.	Develop a broad base of career programs rather than specialize in a few areas.	2	83	1	12	8	106	78%
30.	Developing more interest in Frederick Community College career programs at high schools.	7	91	1	5	2	106	86%
31.	Solving the problem of non-transferability of the career courses.	11	3	82	3	7	106	77%
32.	Developing regional articulation procedures between career programs at different community colleges.	14	3	77	7	5	106	73%

APPENDIX E

FACTOR ANALYSIS OF CAREER EDUCATION GOALS

DELPHI QUESTIONNAIRE II

FACTOR #1

Target No.	Target Area	Factor Loading
30	Develop more interest in Frederick Community College career programs at high schools.	.773
7	Increase community awareness and understanding of career programs at Frederick Community College.	.773
8	Provide more career information for secondary schools.	.716
24	Increase efforts to obtain additional grants or financial sources for career programs.	.697

FACTOR #2

Target No.	Target Area	Factor Loading
4	Increase efforts to develop career training programs for undereducated and underemployed.	.764
5	Increase remedial and/or tutorial programs to enable all students to benefit from career courses.	.777

FACTOR #3

Target No.	Target Area	Factor Loading
10	Develop evaluation techniques that are based more on measurable goals.	.808
16	Develop programs which achieve immediate student goals.	.626
25	Develop more innovative teaching methodology which take into consideration individual student differences.	.549
11	Increasing enrollment of career students in relation to students in transfer programs.	.496

FACTOR #4

Target No.	Target Area	Factor Loading
29	Develop broad base of career programs rather than specialize in a few areas.	.726
27	Develop curriculums that will attract new job opportunities (industrial, commercial, government) to this area.	.680
23	Develop a technical or vocational center for career programs.	.609

FACTOR #5

Target No.	Target Area	Factor Loading
18	Prepare adults for orderly re-training from one field to another due to economic and technological change.	.777
19	Preparing students to go on to higher education in career fields.	.582
20	Developing an awareness that college is not the end of education.	.482
2	Preparing programs that assist individuals in career planning and decision making.	.446

FACTOR #6

Target No.	Target Area	Factor Loading
17	Preparing students for occupations that will be found a decade from now.	.687
26	Conducting follow-up studies to provide relevant feedback on past graduates of career programs.	.625
22	Develop core courses that apply to a cluster of occupations.	.493
32	Develop regional articulation procedures between career programs at different community colleges.	.448

FACTOR #7

Target No.	Target Area	Factor Loading
3	Develop forecasting procedures that reflect changes in local employment demand and supply.	.667
15	Develop career programs to meet specific needs of Frederick County employers.	.613
27	Prepare students for careers through greater use of supervised work experience or cooperative education programs.	.498
9	Increase business/community involvement in career program planning and evaluation.	.483

FACTOR #8

Target No.	Target Area	Factor Loading
1	Develop programs that reflect planning for careers from grades 9 through 2 years at Frederick Community Colleges.	.742
31	Solving the problem of non-transferability of career courses.	.323

FACTOR #9

Target No.	Target Area	Factor Loading
13	Work with employers to insure job placement of Frederick Community College graduates commensurate with their skill and training.	.684
12	Preparing people to obtain gainful employment compatible with their interest and intellect.	.656
31	Solving the problems of non-transferability of career courses.	.548
14	Preparing students for careers anywhere, not just in Frederick County.	.530

FACTOR #10

Target No.	Target Area	Factor Loading
21	Develop our present programs to their fullest.	.665
20	Develop awareness that college is not the end of education.	.456
32	Develop regional articulation procedures between career programs at different community colleges.	.340

APPENDIX F

FREDERICK COMMUNITY COLLEGE
Follow-up Questionnaire

1. Mr., Mrs., Miss _____

2. Name while at Frederick Community College if different from above

_____

3. Present Address _____

4. A. Dates attended Frederick Community College: _____ to _____
   B. _____ A.A. Degree _____ Certificate _____ Program not completed
   C. Date obtained _____

5. Career Program taken at Frederick Community College:

   _____ Data Processing
   _____ Business Management
   _____ Accounting
   _____ Electronics Technology
   _____ Nursing
   _____ Secretarial Science
   _____ Other _____

6. A. Are you presently working?

   _____ Yes, full time
   _____ Yes, part time
   _____ No

   B. If working, would you indicate your present employer and position

   Present employer _____

   Address of employer _____

   Position _____

   C. Are you in the Military? _____ Yes _____ No

   D. Are you weeking employment? _____ Yes _____ No.

   Note: If you answered No to question 6.A., please go on to Question # 11.

7. Are you working in a field related to your Community College studies?

   _____ Yes _____ No

Follow-up Questionnaire - Page 2

8. If employed full time, please indicate your approximate weekly earnings:

_____ Below $100
_____ $100 - $125
_____ $126 - $150
_____ $151 - $175
_____ $176 - $200
_____ Above $200

9. If employed part time, please indicate your approximate hourly wage:

_____ $1.00 - $1.50
_____ $1.51 - $2.00
_____ $2.01 - $2.50
_____ $2.51 - $3.00
_____ $3.01 - $3.50
_____ Above $3.50

10. Which of the following helped you most in securing your employment? Please number in order of importance: 1= most helpful, 2 = next most helpful ..... 9 = least helpful.

_____Parents or relatives
_____Friends
_____Community College placement office
_____Public employment agency
_____Community College instructor
_____Private employment agency
_____Found it myself
_____Newspaper
_____Other _____

11. When did you definitely decide what you now expect to be your vocation:

_____During junior high
_____During senior high
_____During Community College
_____Still undecided

12. To what extend did you find your Career Program at Frederick Community College worthwhile:

_____Greather than expected
_____About what expected
_____Less than expected
_____Total waste

Please give brief explanation:_____

13. To what extend have the General Education courses taken at Frederick Community College (English, sociology, history, etc.) contributed to your success?

_____Greather than expected
_____About what expected
_____Less than expected
_____Total waste

Please give brief explanation: _____

Follow-up Questionnaire - Page 3

14. What experience while attending Frederick Community College other than classes have proven most helpful? Please number in order of importance 1 = most helpful, 2 = helpful, or 3 = least helpful.

_____Part-time employment
_____Student body and/or club activities
_____Athletic activities
_____Other _____

15. A. Have you attended another college or university since graduating from Frederick Community College:

_____ Yes _____ No

B. If yes, what is the name of your school? _____

C. Your major: _____

D. Did you graduate? _____ Yes _____ No

In order for the following questions to be of real value, would you comment briefly, rather than a "yes" or "no" answer.

1. Did your employer recognize your training in terms of ability, knowledge, or higher rate of pay as a result of your junior college training?

2. What suggestions would you make for improving the career program at Frederick Community College?

APPENDIX G

EMPLOYER'S EVALUATION

Name of Employee _____ Date_____

Employer_____

_____

_____

1. Is the above-named person still in your employ?

_____ Yes _____ No

A. Approximately how long was he in your employ? _____

B. If no longer in your employ, do you know where he is presently working? _____

2. Was this person a part-time employee of your company before he became a regular full-time worker:

_____ Yes _____ No

3. What was his beginning job with your company?

_____

4. Has he been promoted since?

_____ Yes _____ No

A. If so, what is his present job title?_____

B. Does he have potential for future promotion?

_____ Yes _____ No

5. How would you rate this individual on the following work characteristics compared to similar employees who did not attend Frederick Community College?

Employer's Evaluation - Page 2

High Low	
(1 2 3 4 5)	1. Dependability
(1 2 3 4 5)	2. Demonstrates initiative
(1 2 3 4 5)	3. Technical competence
(1 2 3 4 5)	4. Cooperative attitude
(1 2 3 4 5)	5. Personal appearance
(1 2 3 4 5)	6. Other (please specify)

A. On the basis of your appraisal of this individual, which of the above work characteristics do you feel need greater emphasis in career or occupational education programs at Frederick Community College:

_____

6. How would you rate this individual's performance as compared to a similar employee who did not attend Frederick Community College:

_____ above average _____ average _____ below average

In order for the following questions to be of real value, would you comment briefly, rather than a "yes" or "no" answer.

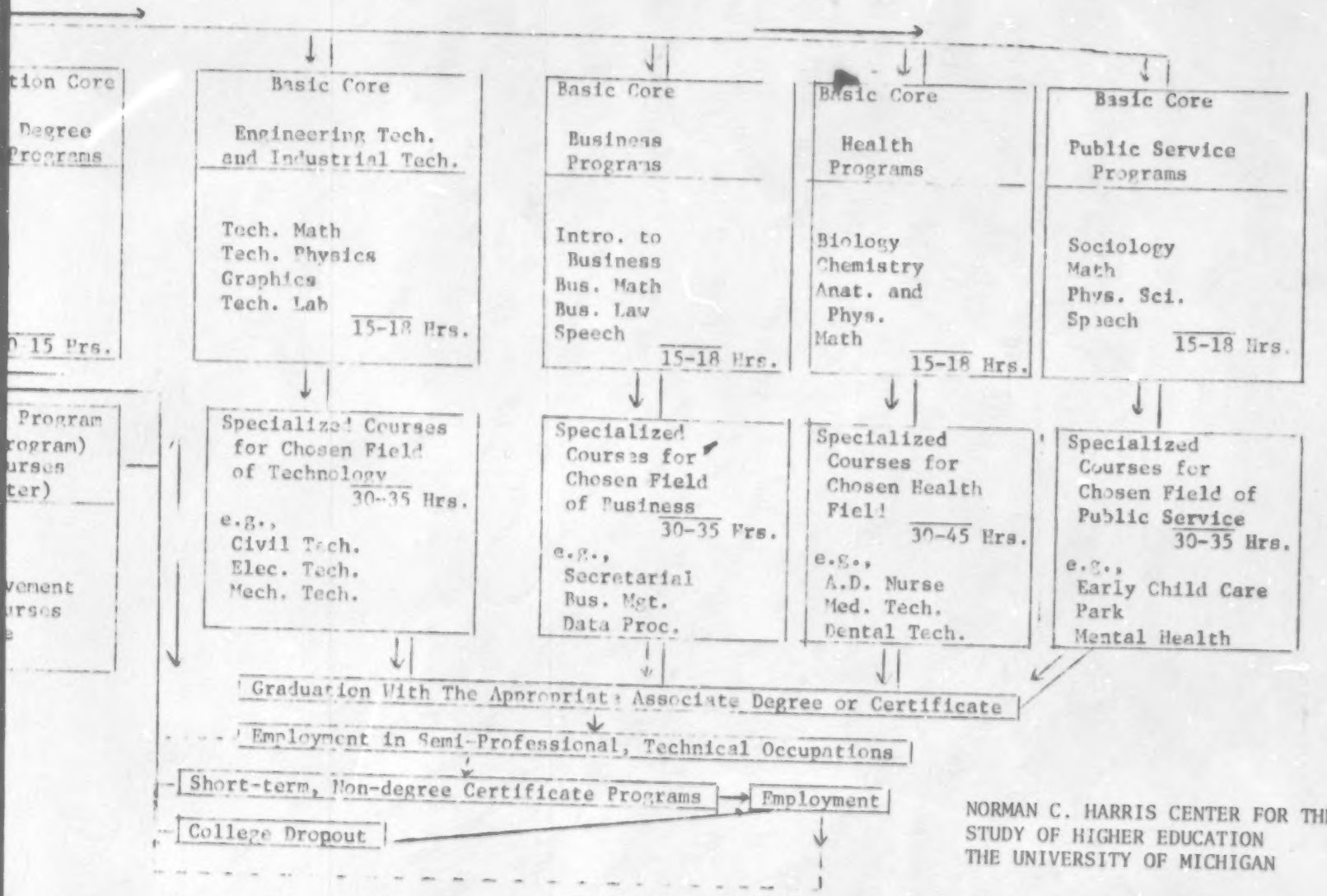
7. Do you feel that a need for two-year college graduates in the technical and/or other career fields is increasing or decreasing in this area? Why?

8. How do you feel the two-year college career programs can be improved in order to better meet the needs of business and industry in this area:

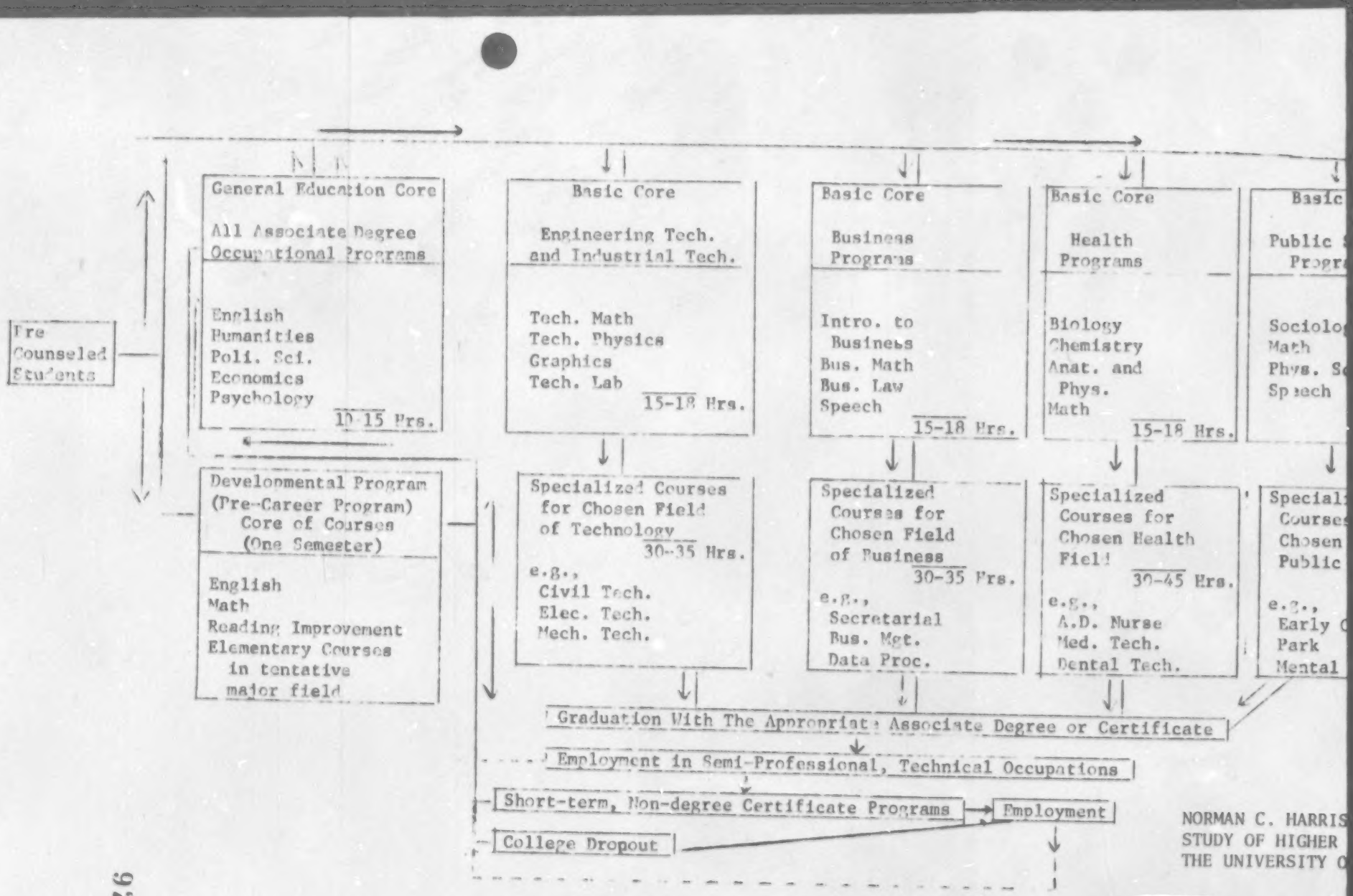
9. Would your company be interested in a cooperating work-experience program with Frederick Community College?

APPENDIX H

CORE CURRICULUM PLAN



NORMAN C. HARRIS CENTER FOR THE
STUDY OF HIGHER EDUCATION
THE UNIVERSITY OF MICHIGAN



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STUDY OF HIGHER
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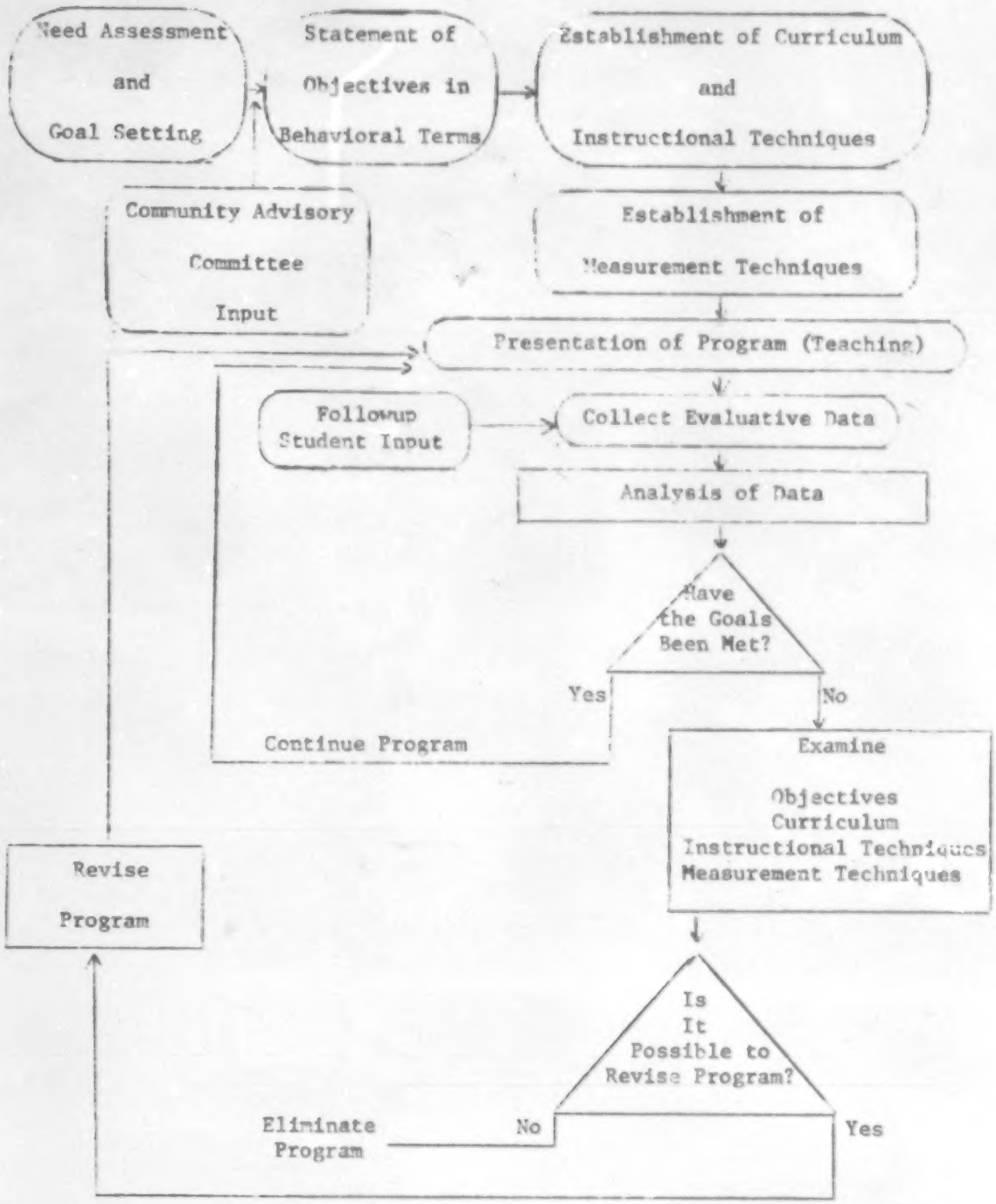
APPENDIX I

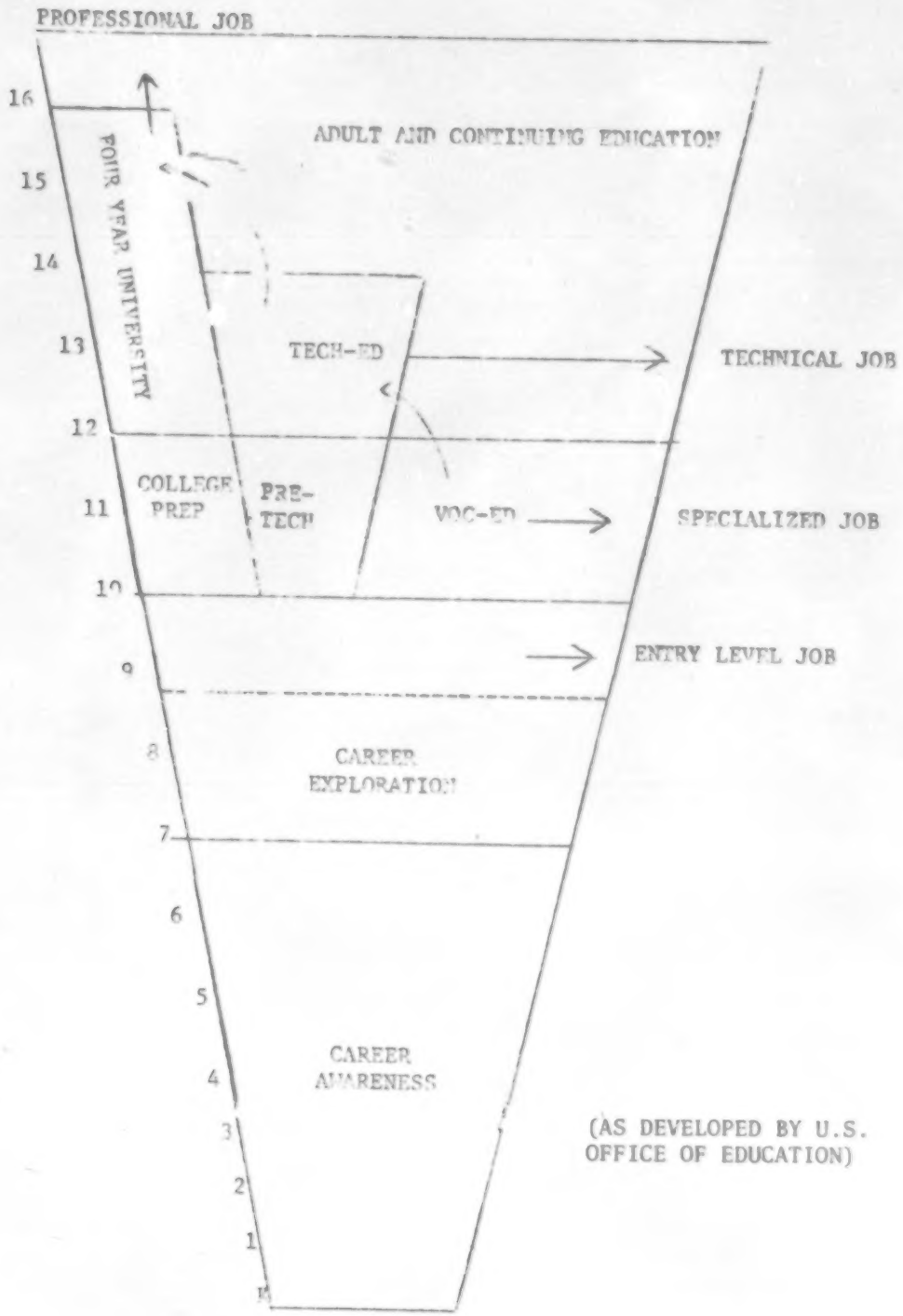
CAREER PROGRAM EVALUATION PARADIGM



(AS DEVELOPED BY INSTITUTIONAL RESEARCH OFFICE OF PRINCE GEORGE'S COMMUNITY COLLEGE, LARGO, MARYLAND)

APPENDIX J

CAREER EDUCATION MODEL



(AS DEVELOPED BY U.S. OFFICE OF EDUCATION)

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